

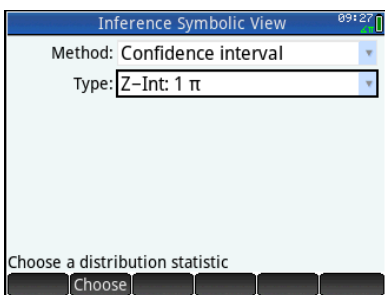


## TECHNOLOGY CORNER

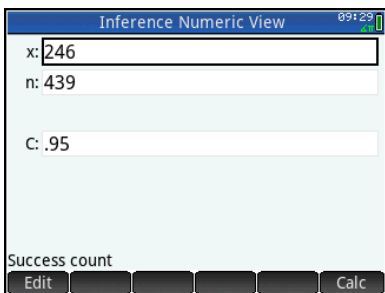
### 15. Confidence interval for a population proportion on the HP Prime

HP Prime can be used to construct a confidence interval for an unknown population proportion. We'll demonstrate using the previous example. Of  $n = 439$  teens surveyed,  $X = 246$  said they thought that young people should wait to have sex until after marriage. To construct a 95% confidence interval:

- Press **Apps** and tap the *Inference* app icon.
- Select the **Method** field, tap **Choose** and select *Confidence Interval*
- In the **Type** field, select *Z-Int: 1  $\pi$*



- Press **Num** to enter the Numeric view. Enter  $x=246$ ,  $n=439$ , and  $C=0.95$ .



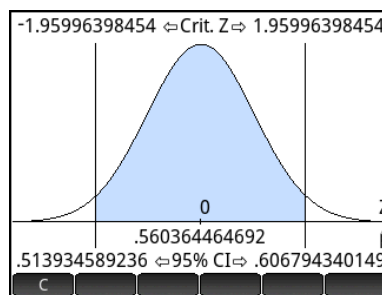
- Tap **Calc** to see the results numerically.

Results	
X	
C	.95
Crit. Z	$\pm 1.95996398454$
Lower	.513934589236
Upper	.606794340149
95%	
Size OK	

- Tap **OK** to return to the Numeric view

You can also view the confidence interval graphically.

- Press **Plot** to see the Plot view. The confidence interval is shown at the bottom, with the  $\hat{p}$  value and the critical z-values.



- Tap **C** to activate the dynamic confidence interval. Press  $\uparrow$  and  $\downarrow$  to increase and decrease the confidence level and see the effect on the size of the confidence interval.

